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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,913	11/21/2003	John M. McBean	MIT-152AUS	2397

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DALY, CROWLEY, MOFFORD & DURKEE, LLP
SUITE 301A
354A TURNPIKE STREET
CANTON, MA 02021-2714

EXAMINER	
BROWN, MICHAEL A	

ART UNIT	PAPER NUMBER
3764	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,913	MCBEAN ET AL.	
	Examiner	Art Unit	
	Michael Brown	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-20* is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman '259 in view of Scanlon, along with Beard '296.

Rahman discloses in figure 3 a powered orthotic device, substantially as claimed. However, Rahman doesn't disclose the sensors inside of the strap or a first and second strap. Scanlon teaches in figure 10 a monitoring device comprising first and second straps 104 and a sensor 12 on the inside of the straps. Beard teaches in figures 1-5 a powered orthotic comprising a power source 12, a cable 3 and a muscle sensing means 43. It would have been obvious to one having ordinary skill in the art at the time that the invention was made that the sensor disclosed by Rahman could be inside of the first and second straps as taught by Scanlon in order to locate the sensor adjacent to a muscle. The device disclosed by Rahman could be operated by the power source as taught by Beard. The sensor as taught by Beard could be substituted for the sensor disclosed by Rahman in order to be able to senses muscle movement. The control as taught by Beard could be used to lock the device in place.

Claims 2-5, 7 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims above, and further in view of Petrofsky.

Petrofsky teaches in figure 15 a computer controlled hydraulic resistance device comprising a sensing and control in a closed loop manner (col. 10, lines 10-15), a hydraulic actuator 211, a mean 200, for receiving a sensor signal 2 and for scaling the sensor signal and the closed loop circuit 207, controls the amount of force (the valve 210 controls the amount of force applied to the actuator). It would have been obvious to one having ordinary skill in the art at the time that the invention was made that the sensing and closed loop circuit as taught by Petrofsky could be incorporated into the orthotic device by Rahman in order to use the closed loop circuit to control the amount of pressure that is applied to the actuator. Thus, making it possible to control the movement of the orthotic. Petrofsky also teaches a control means 200 that includes a means 204 for making low impedance measurements of output torque. Rahman discloses attaching the orthotic to a wheelchair (col. 1, lines 35-37).

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims above, and further in view of Scorvo.
Scorvo teaches an orthotic brace comprising an actuator 300 that is pneumatic. It would have been obvious to one having ordinary skill in the art at the time that the invention was made that the actuator disclosed by Rahman could be pneumatic as taught by Scorvo because pneumatic and hydraulic actuators are interchangeable. It is old and well known that an actuator can be electric.

Allowable Subject Matter

Claim10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-20 are allowed.

Response to Arguments

Applicant's arguments filed October 7, 2005 have been fully considered but they are not persuasive. Applicant argues that Rahman does disclose the invention substantially as claimed, having a sensor or a strap for connecting the device to the body. However, Rahman discloses a force type sensor (page 2, section 0018, line 8) and a strap (page 2, section 0037, lines 20-24) for connecting the device to the body. Applicant argues that the sling as taught by Scanlon doesn't attach a brace to a body part of a person, as recited in claim 1. However, no part of the body can be claimed. In other words no patentable weight is given to whether the sling is attached to a body part. Clearly, Scanlon discloses a sling that is capable of attaching any object to the body. Applicant argues that sensor as taught by Beard couldn't be substituted for the sensor as taught by Scanlon. However, Rahman has discloses attaching a force sensor to an orthotic to detect a force which can be placed on the body. Scanlon was simply used as a modifier to provide a first and second strap and placing a sensor in the strap. Beard was used as a modifier to substitute a muscle sensor means and a power means. Applicant argues that it is faulty to substitute the sensor as taught by Beard for the sensor as taught by Rahman because Rahman doesn't disclose a sensor. However, Rahman does disclose a sensor as set forth above. Applicant argues that if

the sensor as taught by Scanlon was substituted for the sensor as taught by Beard it would be mounted inside a fluid filled bladder. However, Scanlon teaches mounting the sensor to a strap. Beard provides the type of sensor necessary to perform the function of detecting force on a user's muscles. Applicant argues that the prior art doesn't disclose a powered orthotic device with an external actuator. Rahman disclose an orthotic with an actuator. Beard was used as a modifier to make the orthotic a powered orthotic. As for the force having a magnitude which is proportional to the magnitude of a sensor signal with a ration of power delivered by the actuator to the mass of the actuator (this is intended use that the prior art is capable of performing).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Brown whose telephone number is 571-272-4972. The examiner can normally be reached on 5:30 am-4:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gergory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Brown
January 5, 2006

MICHAEL A. BROWN
PRIMARY EXAMINER